C-17 SYSTEM PROGRAM OFFICE NINETEENTH QUARTERLY REDUCTION IN TOTAL OWNERSHIP COST (RTOC) FORUM

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Logistics
August 4, 2004

OVERVIEW

- C-17 Aircraft and its Success
- Institutionalizing RTOC in the C-17
- Globemaster III Sustainment Partnership (GSP) Contract
- Summary

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C-17 SPO MISSION

Deliver & Sustain Quality C-17 Fleet

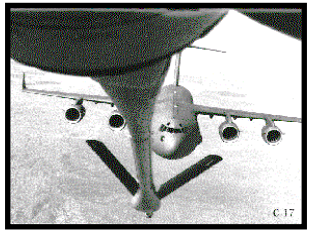
Improve C-17 Capability and Support

Lower C-17 Life Cycle Cost

Improve C-17 Readiness

COMBINES ATTRIBUTES OF SEVERAL AIRLIFTERS INTO ONE

Direct Delivery



Air Refueling

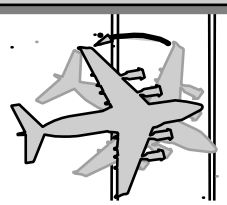
Airdrop

Small Austere Airfields

Combat Offload

Roll-On/Roll-Off

Ground Maneuverability

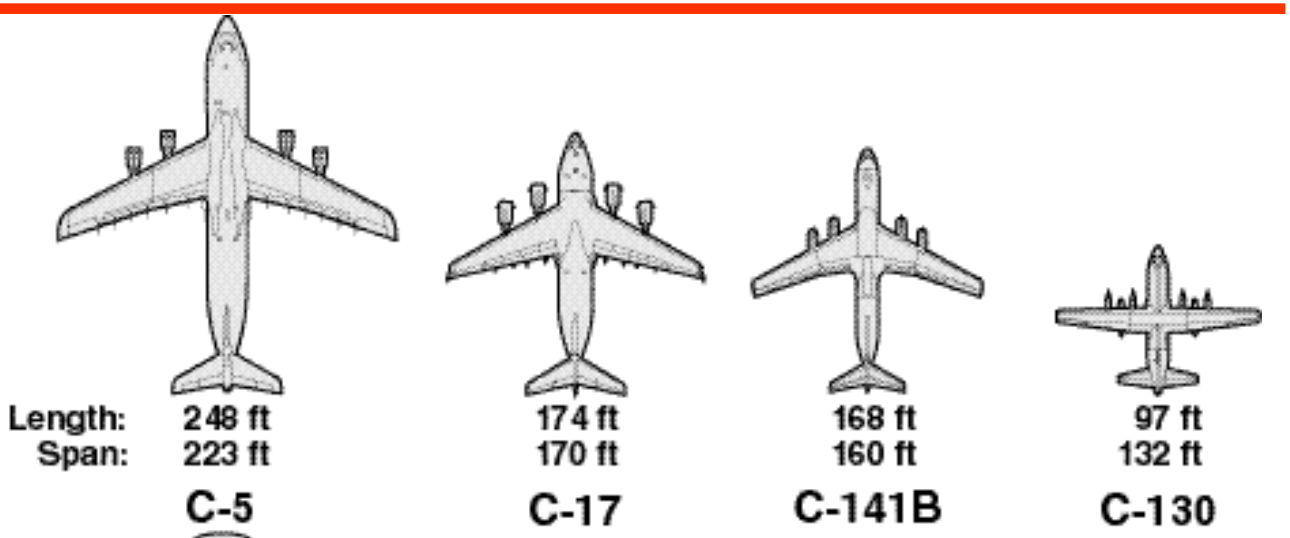


Oversize/Outsize Cargo

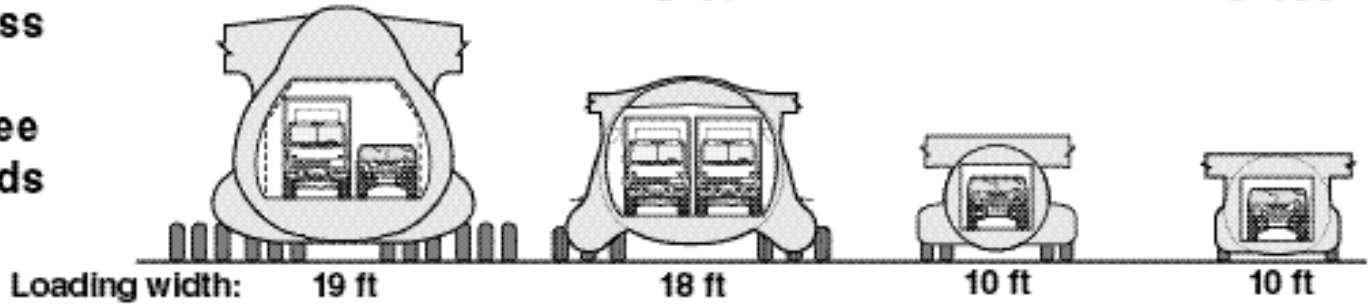
Survivability

PROVIDES A UNIQUE CAPABILITY

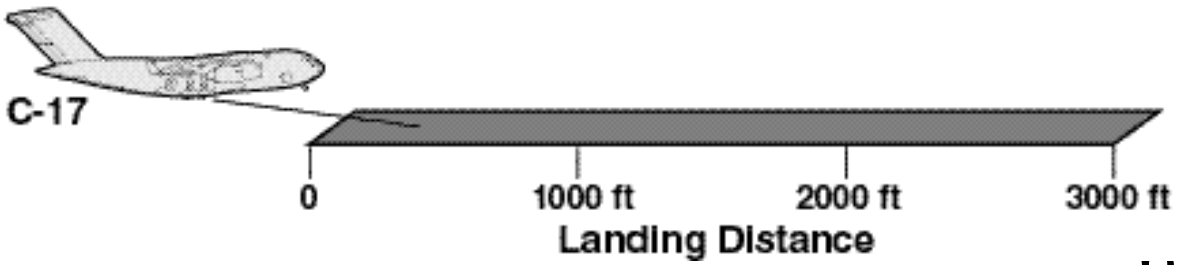
External size similar to C-141, but carries twice the cargo



More efficient cross section than C-5, and access to three times more airfields



Lands at C-130-size airfields, but with four times more cargo (80 tons)



OPERATION ENDURING FREEDOM (OEF)/ OPERATION IRAQI FREEDOM (OIF)

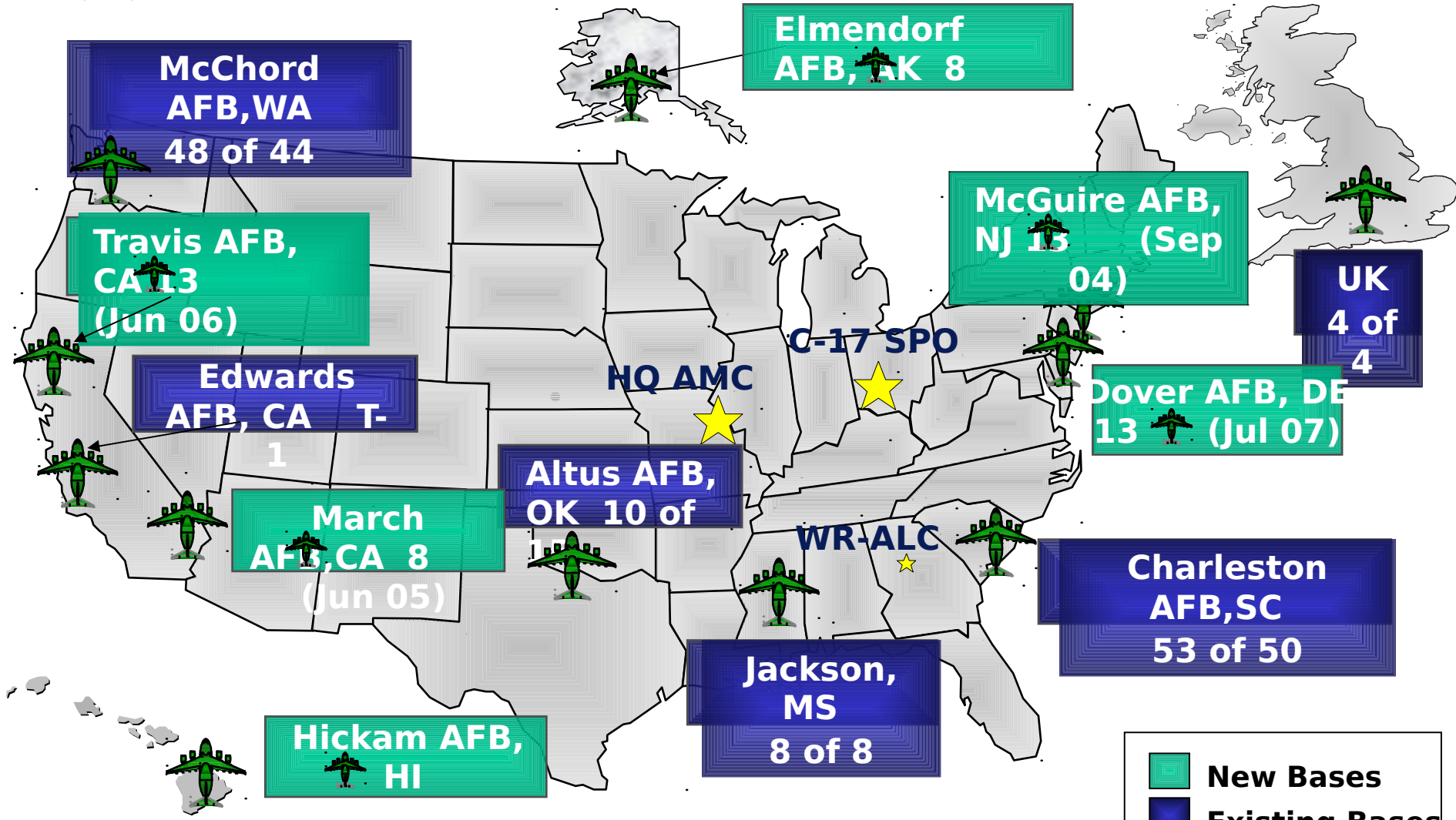
Airmen from the 16th Special Operations Wing at Hurlburt Field, Fla., offload a MH-53J Pave Low III helicopter from a C-17A Globemaster III at an Operation Enduring Freedom location. The C-17 can carry nearly every type of Air Force and Army air-transportable equipment.

SUCCESSES

- **Highest Operational C-17 Airdrop**
- **High Altitude Airdrop of 2.4M Humanitarian Rations**
- ***First*** **Air Land Delivery of *Combat Loaded* M1A1 Main Battle Tank**
- ***First*** **C-17 Combat Personnel Airdrop**
  - Opened Northern Front, Inaccessible by Land
  - Largest C-17 Combat Formation Ever Flown
  - Assembled a Complete Brigade in Just Under 1 Week
- **Flown 214,000 hours delivering**

253,000 pax and 338,000 STONs

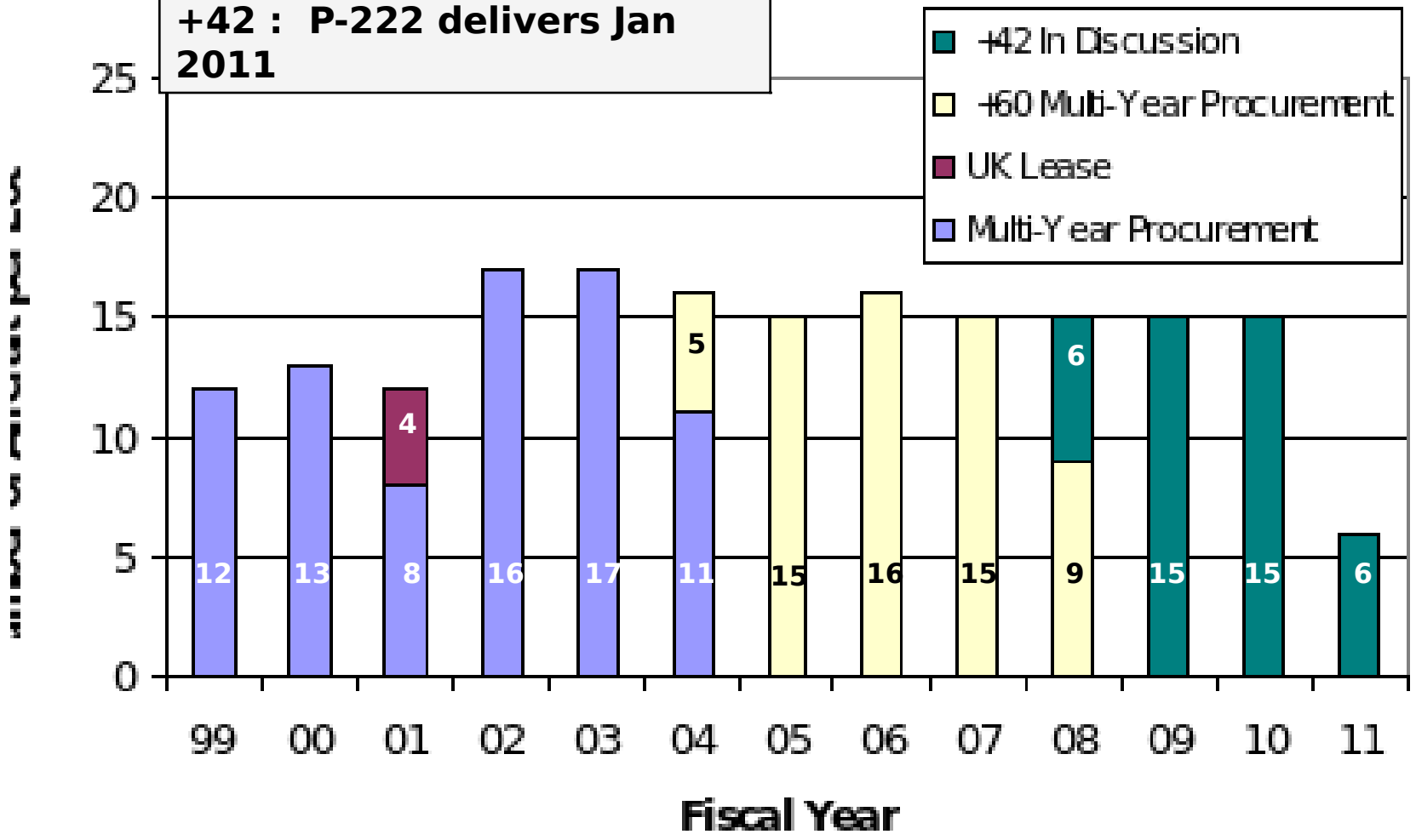
CURRENT AND FUTURE C-17 BASING CONCEPT



As of: 30 Jun 04

AIRCRAFT DELIVERY PROFILE

MYI: P-120 delivers May 04
MYII: P-180 delivers Apr 08
+42 : P-222 delivers Jan 2011



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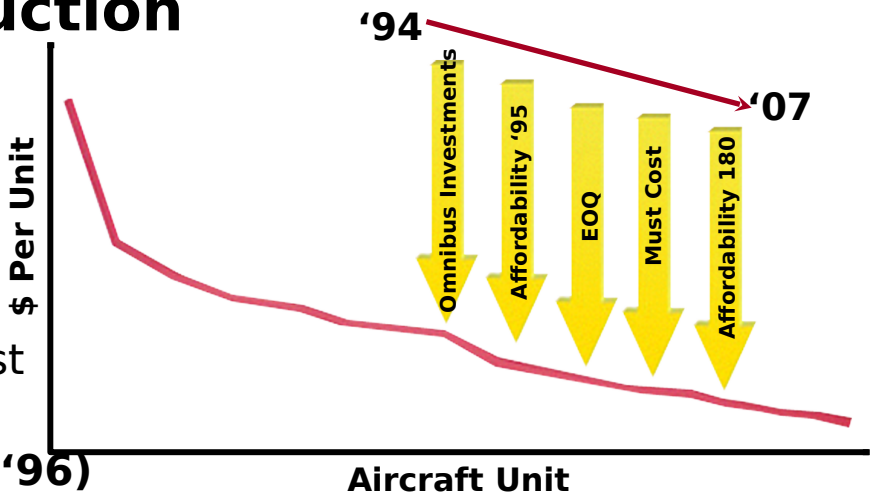
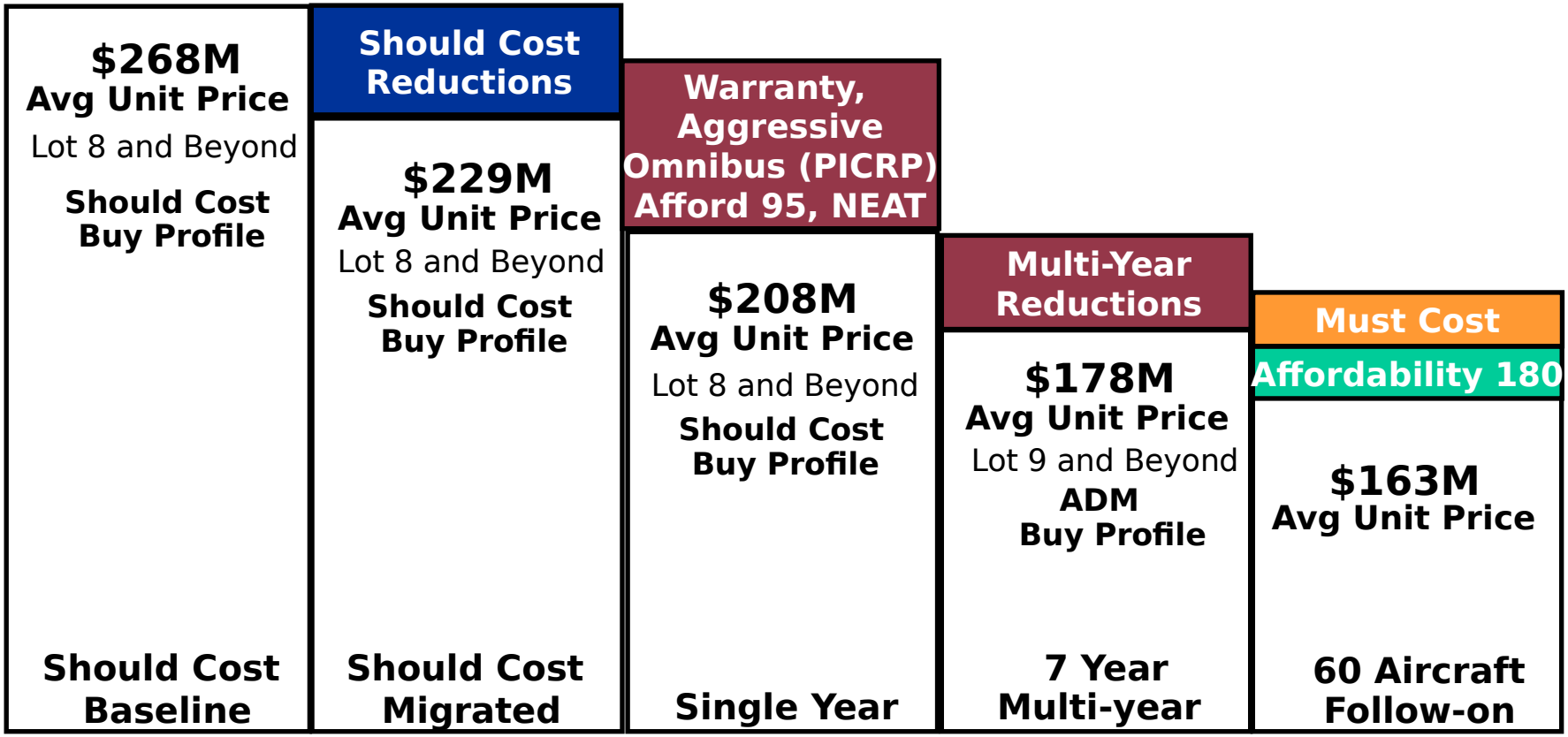
PRODUCTION AFFORDABILITY PROGRAM

- **Affordability program has become a way of life for C-17 aircraft cost reduction initiatives:**



1) **Omnibus Investments ('94/'95)**
   $101M Gov't and Boeing funds under Omnibus Agreement
2) **Affordability ('95)**
   $249M Gov't funds to reduce unit cost under FPI production contract
3) **Economic Order Quantity (EOQ) ('96)**
   $300M Gov't funds to perform aircraft cost reduction efforts, savings factored into MYP I contract
4) **Must Cost ('99)**
   $212M Gov't funds with purpose of reducing future aircraft MYP II procurement costs
5) **Affordability 180 ('01/'02)**
   Boeing funds to ensure 60 aircraft follow-on cost targets can be achieved

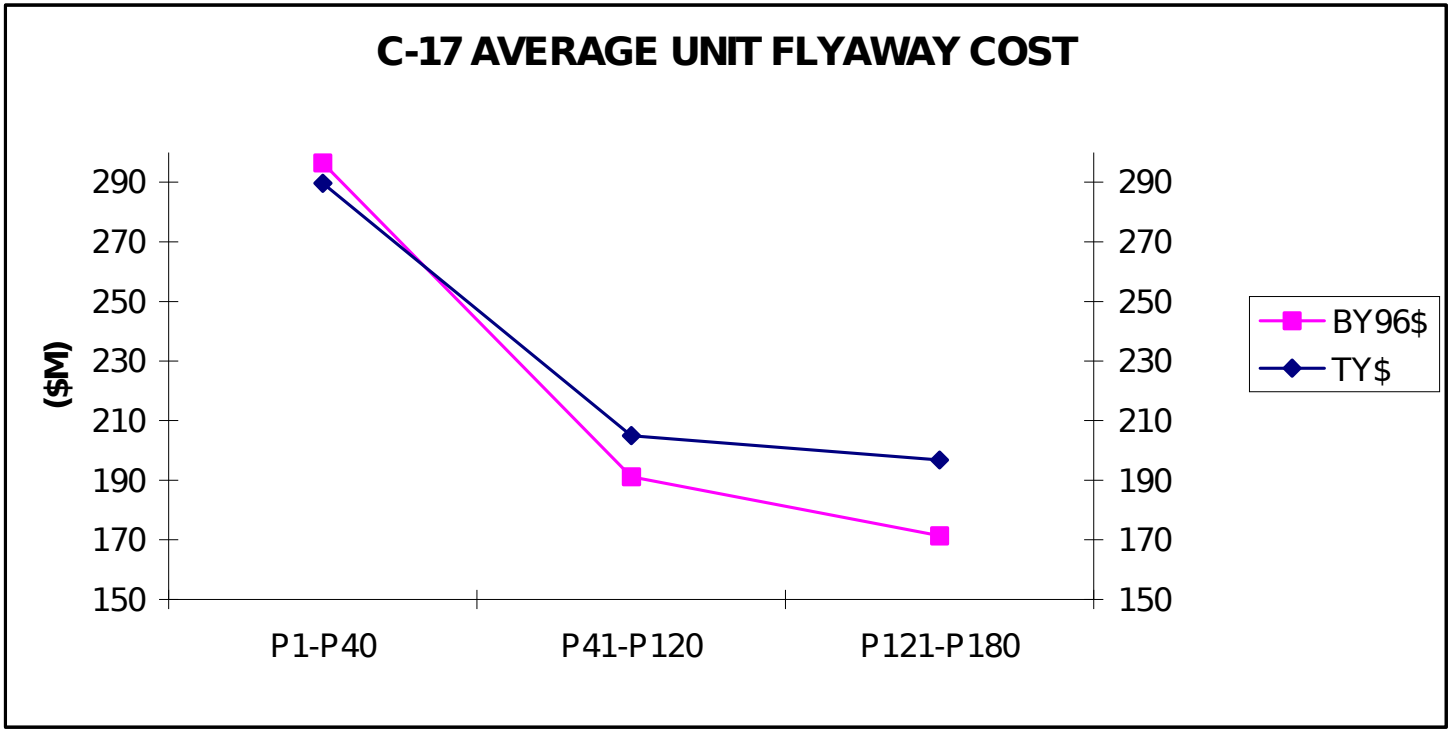
OVERALL C-17 ACQUISITION AIRFRAME PRICE STORY (TY$)



C-17 RTOC Activity Before 1999

C-17 AVERAGE UNIT FLYAWAY COST

P1-P40	P41-P120	P121-P180	P181-P222
AVERAGE UNIT COST TY$ 289.6 BY96$ 296.5	AVERAGE UNIT COST TY$ 204.9 BY96$ 191.1	AVERAGE UNIT COST TY$ 196.8 BY96$ 171.3	AVERAGE UNIT COST TY$??? BY96$???



PROJECTED RTOC SAVINGS

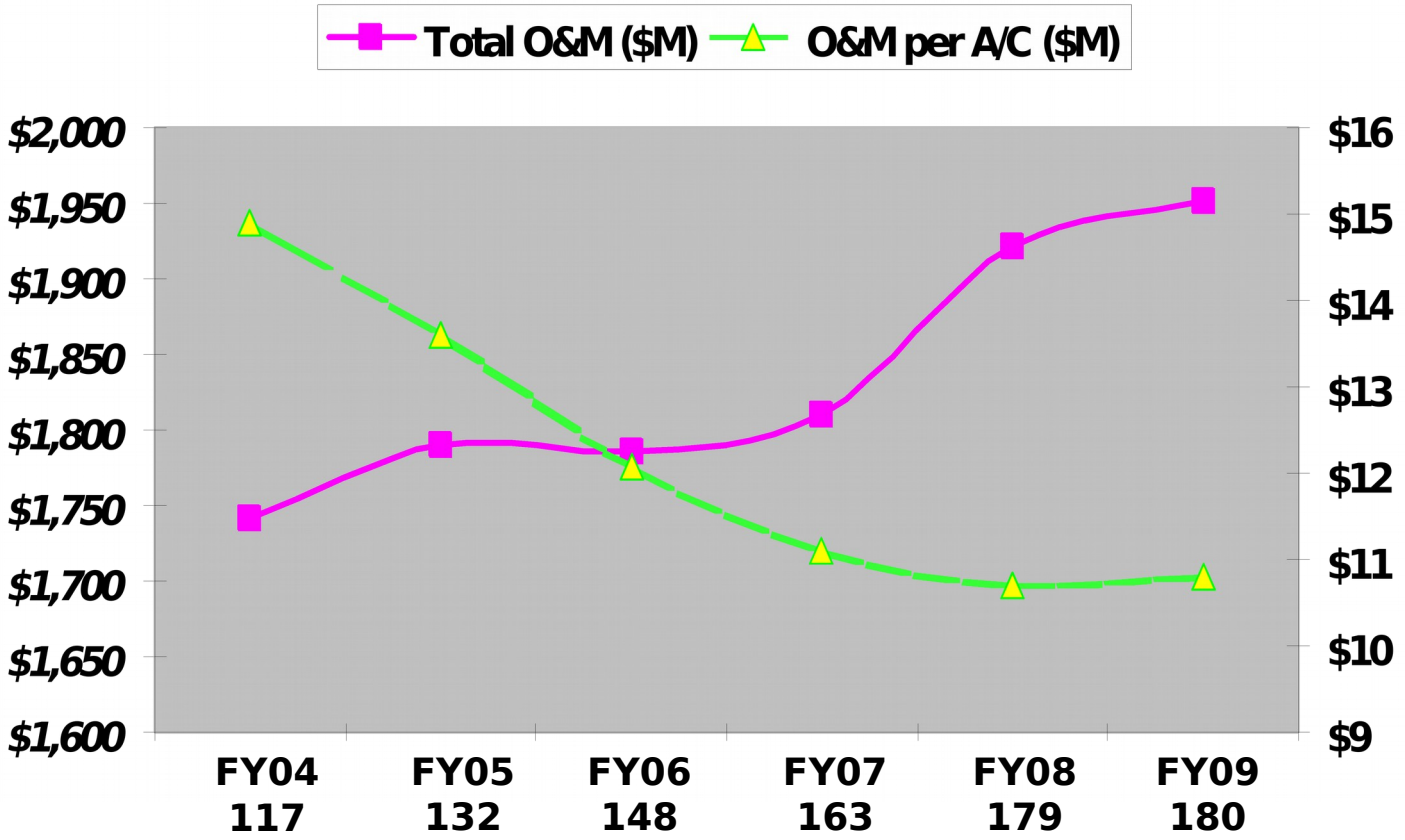
RTOC Approved Business Case Analyses (BCA)

BCA (TY$ M)	FY02/ Prior	FY03	FY04	FY05	FY06 to Completion
Multi-Year Procurement	$390.4	$88.0	$0.0	$0.0	$0.0
Follow-On MYP P121-P180	$13.5	-$133.9	$129.1	$254.9	$1,239.8
Combustion Engine Exit Temp. Kit	$6.3	$19.3	$26.4	$26.4	$633.6
Optical Quick Access Recorder	$5.2	$1.1	$1.4	$1.5	$38.4
Modern Int Level Test Station	$4.9	$4.9	$4.9	$4.9	$98.2
OBIGGS 1.1			$2.0	$9.6	$477.4
Pitot Tube Probe Redesign			$0.3	$0.3	$14.4
MLG Improvements		<.1	<.1	$3.9	$756.6
Imp Position/Navigation Light			<.1	$0.1	$1.5
Loadmaster Printer Removal			<.1	$0.2	$9.3
Total Projected Savings	*$581.8*	*-$20.6*	*$164.1*	*$301.8*	*$3,269.2*

C-17 SUPPORTABILITY MODEL

- **Prioritizes Projects for the Material Improvement Program (MIP)**
  - **Aircraft deficiencies are submitted from the field**
  - **Root causes are evaluated, solutions identified**
  - **Resources are applied to resolve the problem**
  - **Supportability Model rank orders the Deficiency Reports/MIPs**
  - **The Model rank orders DRs/MIPs based on OSS&E, Mission Capable Rate and Real Hazard Index**
  - **Results are presented to AMC and highest priority MIPS are elevated to "fenced funding" category**
- **52 FY04 MIP projects to raise MC rate 0.8 % providing**

RTOC O&M BASELINE



C-17 Program is improving capability and reducing O&M cost per aircraft

*** FY04 is Baseline Year**

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GSP OVERVIEW

GSP Introduction

New Features and Incentives

Contract Metrics

Summary

GSP Introduction

- **Covers all the labor and material support provided by the successful Flexible Sustainment Contract**
- **In addition to covering all the requirements of the previous Flex Contract, the new GSP Contract:**
  - **Doubles the number of supported bases (5 to 10 MOBs)**
  - **Supports 30% more aircraft (covers 185 C-17s)**
  - **Includes support for three new customers (ANG, AFR, and PACAF)**
  - **Expands an already successful depot strategy**
  - **Incorporates new innovations for engineering and supply practices (MIP, PBL…)**
  - **Guarantees of increased fleet availability in yearly increments**
  - **Increases the standard for issue effectiveness**
  - **Increased TSSR responsibility for contingency and Depot planning**
  - **Growing logistics partnership**

Builds upon a successful history of superior contract support

GSP Introduction (Cont)

- **5-year Contract valued at $4.94B**

- **Contract Type**
  - **FFP/AF (65%) includes P&W engine subcontract and agreed upon labor hours**
  - **CPIF (35%) includes inter-department Boeing hours and all material support – procurement and component repair**
  - **T&M efforts include MIP, UK safety investigations and O&A**

- **Boeing Investment in Air Logistics Centers**
  - **$62M, primarily in form of capital equipment**
  - **Invest in all 3 ALCs at no increased price to sustainment contract**
  - **Supplement to the $94M AF investments in ALCs**

- **Contract signed 22 Jul 04**

FFP New Features and Incentives

- **The award fee - 5% of FFP pool**
- **The profit rate is 13%**
- **Customer satisfaction has an increased emphasis**
  - **Two Award Fee metrics**
    - **Non-empirical: 15% Customer Satisfaction**
    - **Empirical: 85% Aircraft Availability**
- **Twice a year feedback and award fee determination**
  - **Mid Year pool is 35% (70% of 50%)**
  - **End Year Award fee pool is the remaining 65% plus any unawarded pool from the mid year review**

User influence & increased performance

Other Features and Incentives

- **Opportunity for faster execution of T&M and Class II requirements**
  - **Attempting to bake in a ceiling for MIP and UK airworthiness**
  - **Without RFP, Boeing can submit cost volumes for class II changes**
- **Hub and Spoke support to USAF bases to reduce personnel footprint**
- **Expanded Total System Support Responsibilities**
  - **More latitude to respond to USAF contingency**
    - **RSP and HPMSK spares kits support**
    - **More Field Teams**
  - **More Site Activation program management**
  - **Recurring Enroute and BASC spares procurement planning**
  - **More Latitude for Engineering and supply cost saving initiatives**

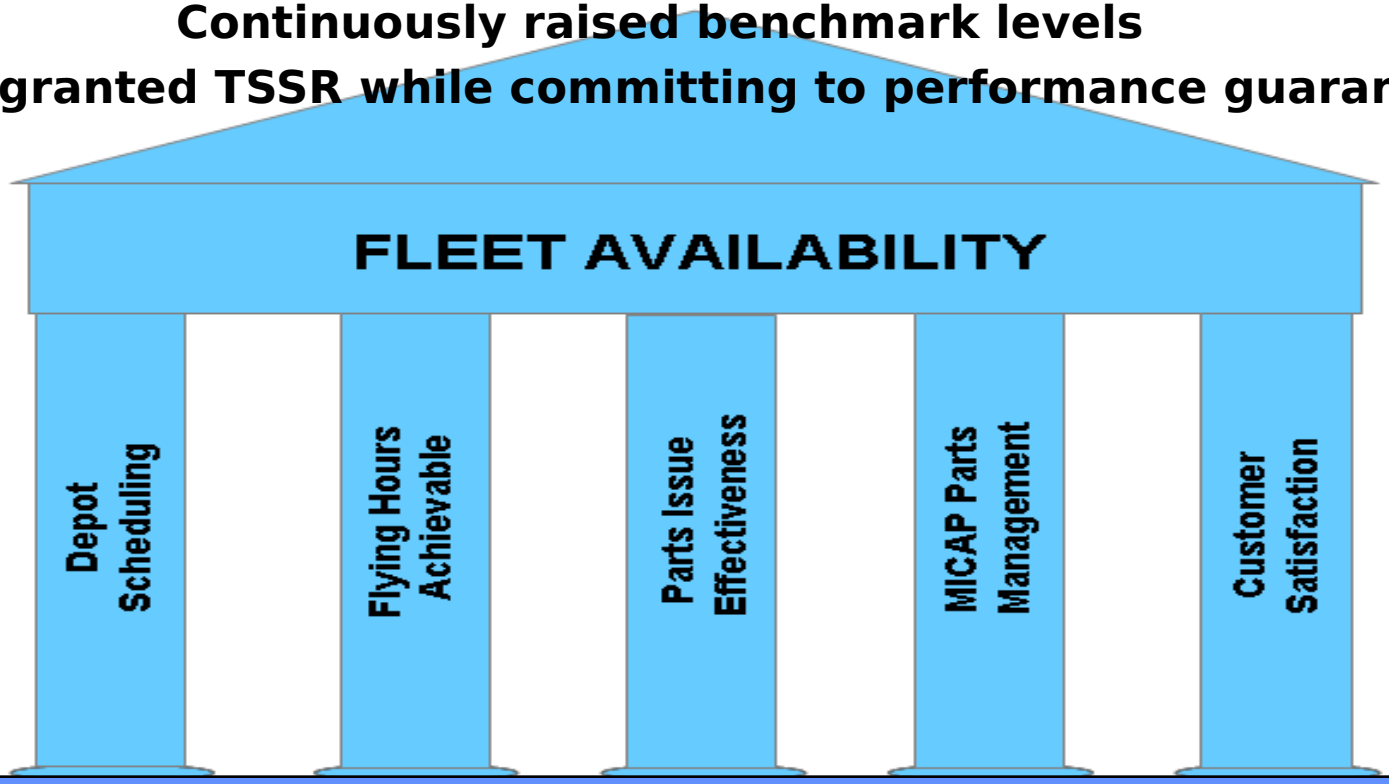
GSP is Performance Based Logistics

Boeing's TSSR role includes C-17 item management and depot-level repair of C-17 airframe and sub-components

Six contract performance metrics

Continuously raised benchmark levels

Boeing granted TSSR while committing to performance guarantees



Support To UK and USAF Users Is Paramount

GSP Summary

- **Contract signed 22 Jul 04**
- **Builds on a successful sustainment contract history by adding more requirements, more incentives, more responsibility, and more performance**
- **More user feedback and influence on award fee**
- **Challenges will require constant user feedback and agile contract processes**

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- **Globemaster III Sustainment Partnership (GSP) Contract**

SUMMARY

C-17 SPO achieving its mission

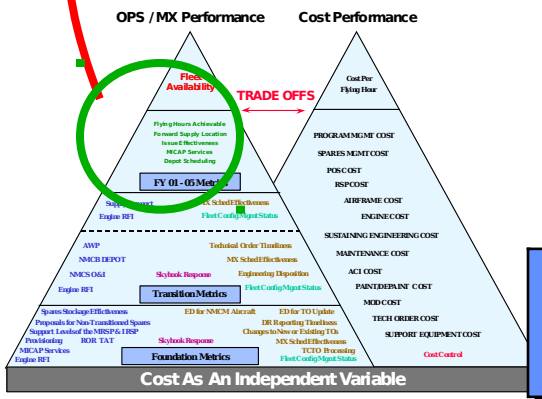
- **Deliver & Sustain Quality C-17 Fleet**
- **Improve C-17 Capability and Support**
- **Lower C-17 Life Cycle Cost**
- **Improve C-17 Readiness**

Marines from the 26th Marine Expeditionary Unit line up to board a C-17A Globemaster III at an operating location in support of Operation Enduring Freedom

Backup

Metrics Strategy

- Globemaster Sustainment Aircraft Availability (GSAA)
  health of the fleet
- Depot Maintenance Scheduling Effect
  depot level maintenance
- Flying Hours Achievable (FHA)
  wartime preparedness
- Issue Effectiveness
  peacetime and wartime supply support
- MICAP Service Effectiveness
  critical parts shortages
- Customer Satisfaction
  Contract Compliance

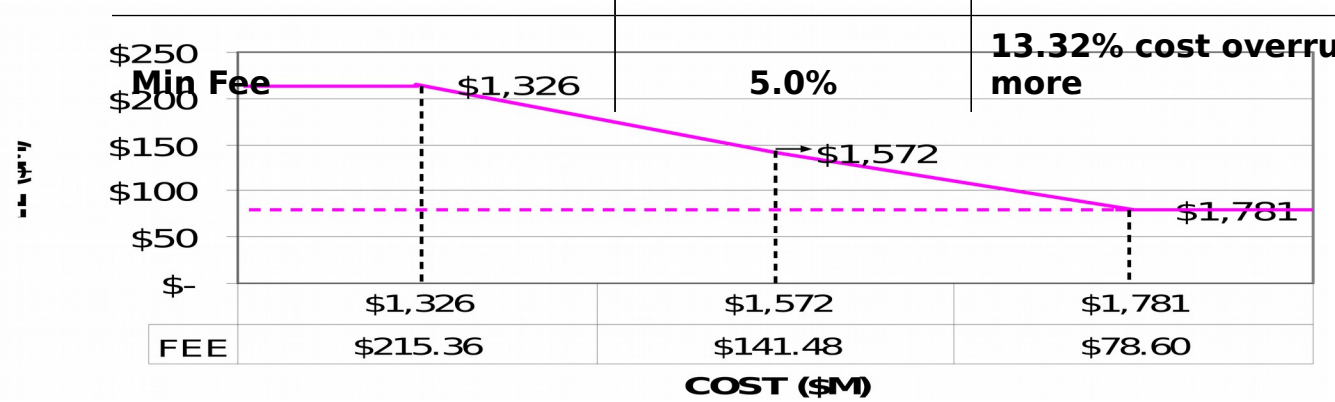


A few hard hitting Metrics part of long term strategy

CP New Features and Incentives

- **Incentivizes costs control from the negotiated target cost using a 70/30 share ratio**

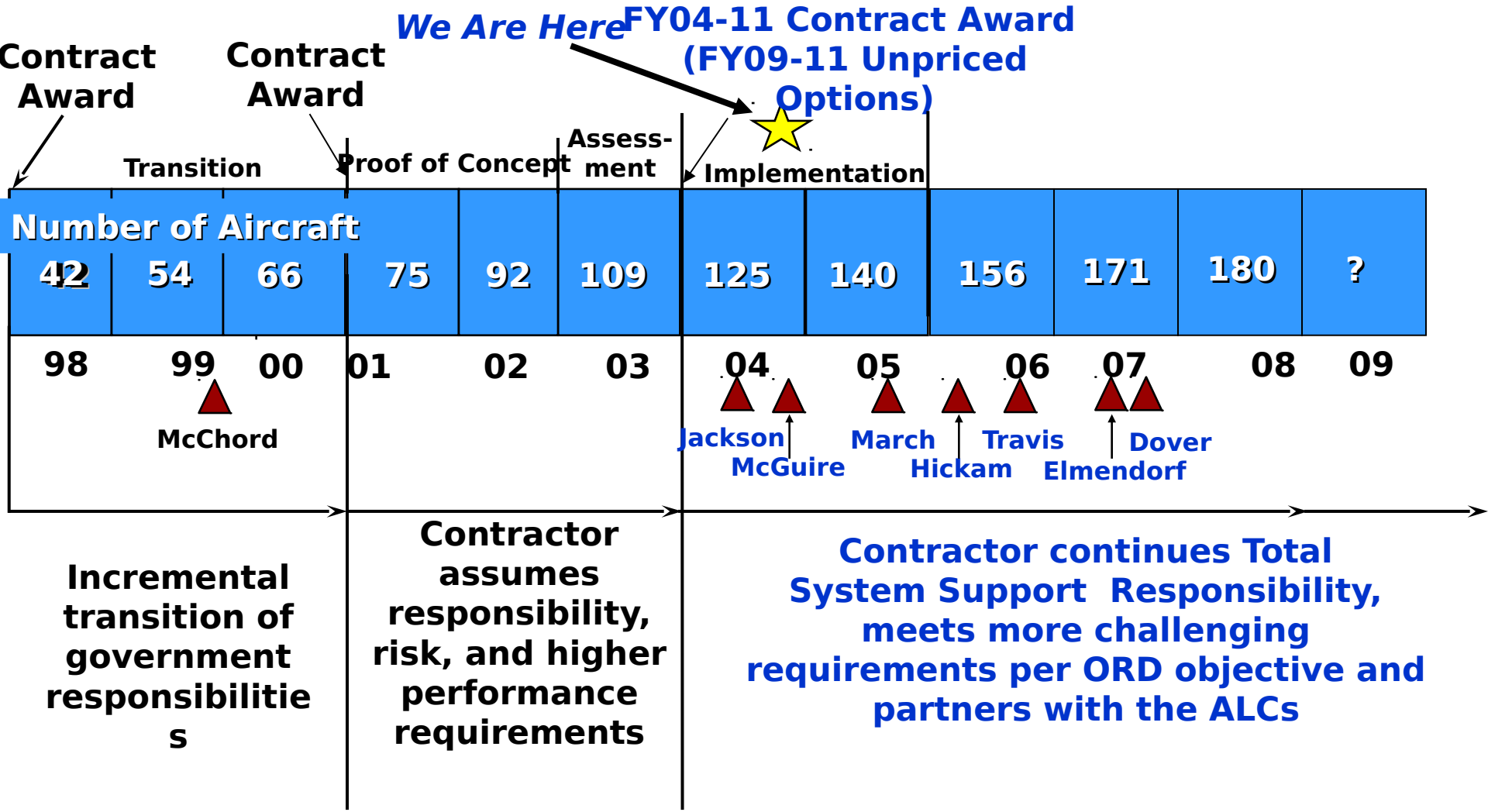
Low Cost Estimate (LCE)	$ 1,325M	15.65% cost underrun
High Cost Estimate (HCE)	$ 1,781M	13.32% cost overrun
Target Fee	9.0%	Target cost
Max Fee	13.7%	15.65% cost underrun or less
Min Fee	5.0%	13.32% cost overrun or more



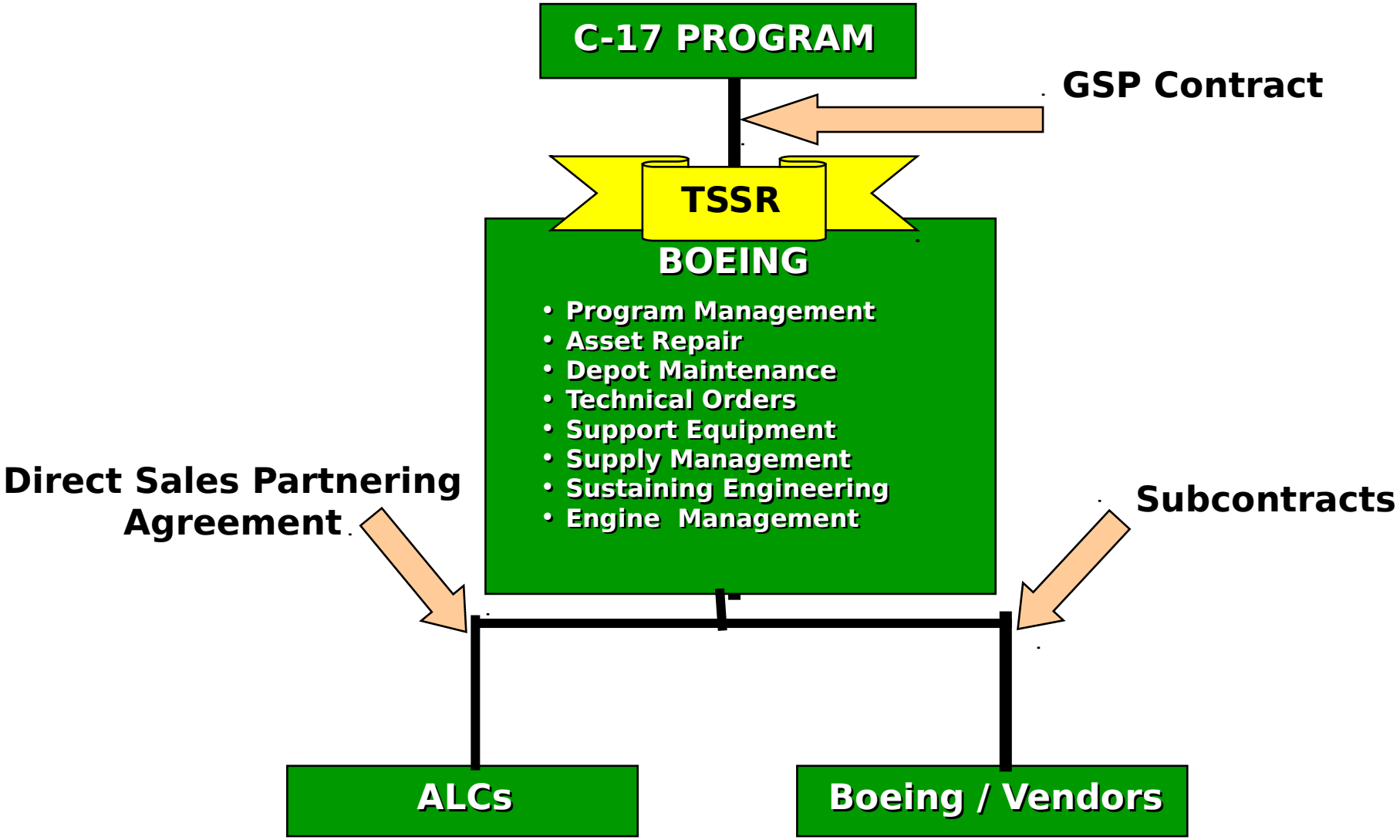
- **Should Boeing demonstrate a cost savings of 14% in FY04 and FY05, the CPIF contract converts to FFP in FY07 and FY08 at a lower cost to government ($134M) and higher profit to Boeing (13% with 5% award fee)**

Incentivizes Cost Control per flying hour and BASC Events

Sustainment Timeline



GSP Relationships



DSPA signed/coordinated with AFMC/CC Nov 02

Metrics Comparison

Flexible Sustainment		Globemaster Sustainment Partneri
Flexible Sustainment Aircraft Availability (FSAA)	Modify	Globemaster III Sustainment Aircraft Availability (GSAA) • Increase requirements
Flying Hours Achievable (FHA)	Same	Flying Hours Achievable (FHA)
Forward Supply Location Replenishment (FSLR)	Delete	
Issue Effectiveness (XD & “all others”)	Modify	Issue Effectiveness (XD & “all others”) • Increase Requirements
MICAP (USAF- 48 hrs, UK - 96 hrs)	Same	MICAP (USAF- 48 hrs, UK - 96 hrs)
Depot Maintenance Schedule Effectiveness(DMSE)	Same	Depot Maintenance Schedule Effectiveness(DMSE)
Cost	Same	Cost
Subjective Customer Satisfaction	Same	Subjective Customer Satisfaction*